

## **INVENTORY SYSTEM**

### **ABSTRACT OF THE DISCLOSURE**

A method and system that provides the functions to search for material that would fit an order or search for order that a piece of material would fit. For that, the system considers the technical specification defined in the processing route assigned to the orders, domain-expert knowledge for check for feasible matches, and a flexible plant model to specify valid feasible stock areas for searching. This system allows complete visibility of all material in a plant and its suitability to be applied to the customer orders. A second aspect of this invention is a material re-allocation method and system. In accordance with this system, each coil to be processed by the finishing area receives a surface defect map. This map indicates the location of the defects and their characteristics.